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THE ADULT WOMAN'S CHALLENGE TO THE HOME ECONOMICS TEACHER[1]

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Home economics is the science and art of bearing, training, housing, clothing, and feeding the human race, in so far as these activities are confined to the family and to the home. I give this definition in order that we may have common ground for interpreting the words *home economics*. The goal of home economics, as I see it, may be expressed in the following: The nation that twenty years from now has the most citizens with efficient bodies and trained minds will lead the world.

Through the entire period of childhood from prenatal life to the end of adolescence, the home and all that pertains to it, are the great factors in the life of the child. On them his chances for health, efficiency, and happiness in any and all of his relations in life chiefly depend. The citizens of a nation are the product of the homes of that country; the home is limited by the intelligence of the homemaker. Education for the homemaker is, therefore, the very foundation of all sound national life. The mother, as a rule, is the dominant influence in the child's life, and every resource of education should be at her command in a task of such momentous importance.

The bearing, training, clothing, and feeding of these citizens is the life work of women, and to furnish the science and the skill necessary for these activities is the task of home economics teachers. Collecting the facts of home economics that are the products of the race, sifting these facts from much undesirable matter, and presenting them in a form in

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which they can and will be utilized by the women of America, has been, and is today, the special work of women trained in home economics.

You have been scouts in the colonial sense of the word, making new trails through the wilderness of accumulated family precedent, heirlooms of ancient custom, inheritance of ancestral sayings and facts, most of which will not bear the test of truth. It has been no small task, and we are not yet out of the woods. Many trails made by you have proved to be well made, and great good has been accomplished by you. Your impress has been definitely stamped on the food of this country already, and better physical specimens must without question be the result of this work of yours.

But I have wondered why you do not turn out more rosy, robust, energetic university girls. The girl who is thin and bloodless, with gray, pimpled skin, so characteristic of lack of proper nutrition and personal hygiene, is seen too often in the ranks of the college graduate. Make your teaching a personal, practical experience with your home economics graduates, and live up to your possibilities and make your influence felt throughout your college. A girl who has lived her home economics for the four years of her college life will not so quickly drop into mother's way of doing things when she goes back home.

You have done much along the line of more sane dress for women, but the apparel of the present generation is not based on sound financial, artistic, moral, or hygienic principles, and much more teaching must be done before this problem is solved.

While you have accomplished much with the people whom you have touched, you have as yet reached only one female in two thousand through all your college, school, and extension work and vocational training. And this work, you must recognize, has been for the most part in food and clothing. Without doubt these are two essentials that can best be taught in groups.

The fact that only 33 to 35 per cent of the girls in high schools elect home economics courses, when such courses are elective rather than compulsory, shows that, in general, home economics has not met the needs of the girls or that it is not their strong interest at that time.

You have been trying to teach more than just food and clothing to your high school and college girls. You are trying now to teach something on child care and nutrition, infant feeding and culture, but as a rule you have not found this girl wildly excited over baby foods or deeply stirred about malnutrition of school children. Her interest in

it is not vital; it is not a real problem to her. When she is married and has a baby of her own or knows that one is soon to be hers, the case is different; then her interest rises to fever heat. That is the time to teach her; that is the time when she will really learn. What she learns today on infant feeding will probably be passé when she has a baby to feed, so rapidly is the knowledge on this subject developing. A great mistake made by educators is that they collect their data in regard to care, feeding, and culture of defective children, all of which points unerringly to the "ignorance of mothers," and they say, "therefore we will educate the school girl in home economics." The logical deduction is that the adult woman must be educated.

We must acquire a new conception of education. Home economics education must be a continuous process for all people. There should be no commencements. Educational facilities must be so arranged that it is possible for the adult woman of all stations in life to procure, at the time when she needs it, the training and information that will enable her properly to care for and train her children. It is the adult woman who must be educated in home economics in the broad sense in which I use the term, if we are ever to remedy our wrong ideals and wrong results, both physical and spiritual. As I see it, this is the challenge of the adult woman to the home economics teacher. We adult women need this education; we cannot now obtain it, and never have been able to obtain it, in a way in which we can assimilate it.

Isolated lectures and government bulletins will not solve this problem. The nearest approach to this adult school is the baby center, or clinic, in the crowded districts of our large cities. They are only a drop in the bucket and are didactic preachments for the most part, rather than the education of the mother in the scientific principles and practice involved. They reach only the mothers of the lower strata, and the mothers of the upper strata need it just as badly. Moreover, we need more than baby feeding. We need education on all things that go to make an ideal American home filled with children who will grow into adult citizens with efficient bodies and trained minds. We challenge the home economics teachers to find the trail and lead us to it. We need training schools and information bureaus where the adult woman can find answers to such problems as these: nutrition, child psychology, amusement of children, moral standards, obedience, and courtesy. We need, not didactic lectures which say do this or do that, but teaching that gives a comprehensive knowledge of the basic facts of chemis-

try, physiology, human nutrition, and preventive medicine. A continuation school for educating and training adult women could do this.

I know you think we adult women are conceited, ignorant, unmanagable, not willing to learn. I have found American women in overwhelming majority quite different; they are willing, teachable, ignorant, yes, of the great field of scientific fact on which the science of home economics is based, but anxious, oh, so anxious, to know how to meet their problems, both physical and spiritual.

The average mother needs a definite, clear-cut knowledge of the biological capital of the individual and of the race, and here the family inheritance, both physical and educational, is often very bad. Take the one question of the origin of life. The average woman knows nothing of ovulation. Babies come by chance, or God sends them; one needs no further proof of this condition than the widespread effort at legal birth control. If a woman knows nothing of ovulation, it follows that she knows nothing of the external influences that affect the germ cells. The actual effect of alcohol on the germ cell is a sealed book to the average adult woman. Venereal disease and its blasting influence on the germ cells, its destruction of the eyes of the newborn, is a thing that some doctors know and take measures to remedy, but it is not the valued possession of the adult woman.

The average adult woman cannot answer the simplest questions of her young child on the origin of life, and she does not possess a vocabulary free from the taint of vulgarity with which to discuss with the child these vital problems. The adolescent child, with his strongly developed sensuous impulses and poorly developed judgment and will, is out of her reach because she has little knowledge of his physiology or psychology.

The tiny boy that asks his mother where baby sister came from, has a right to an intelligent answer. How many of them ever get it? And yet at that moment there is the possibility of establishing a relationship of truth and confidence which would enable the mother to guide the small lad past the thousand dangers that will beset him during adolescence. May I give you an illustration of how it can be done?

This child had spent his early life in town and knew little of animal life. He did know that chickens came out of eggs. One day when he was five years old, he was walking with his mother over a mountain trail and they came upon the shell of a robin's egg. She remarked to him, "A baby robin came out of that shell." He studied the shell a

moment and then said, "Do all birds come out of eggs?" "Yes," was the reply. A moment's silence, and then he said, "Do all animals come out of eggs?" "Yes," she answered. "Did I come out of an egg, mother?" "Yes," came the reply, wonderingly. "Mother, where was that egg?" "Inside my breast, laddie, close to my heart where I could keep it safe and warm." "Did you know, mother, when I was in the egg?" "Yes, son, I knew." He laughed a happy little laugh and continued anxiously, "Were you glad, mother?" "Yes mother, was very, very glad."

As this child grew up this mother answered truthfully always the questions asked. Sometimes the questions were most far-reaching in the possibilities of the answer, and then the mother said, "That question can wait. You do not need to know now since you would not understand, but as you grow older mother will tell you." There came a time when the question was, "Mother, how does life get into the tiny egg?" This was the mother's chance to tell her child that the germ plasma in his body was a direct gift from God, a tiny bit of immortal human life given to him through his parents and to be passed on by him to his own children. This was her opportunity to make that child feel himself a co-worker with God in the possibility of his power of the creation of human life, to make him realize that in these tiny immortal cells was wrapped up all the love, the hope, the inspiration, and the struggles of countless ancestors of his, and that it was in his power to destroy or perfect this heritage of the ages.

We have all been much concerned about the moral welfare of our young men and young women as influenced by a world war. It is well that we should be so concerned. I think sometimes that ignorance of mothers is at the bottom of much of our trouble that comes from social immorality. We have not known how to present the great fact of origin of life and immortality of the germ cell to our children. When it comes to matters of sex, we have said "don't" to our daughters and kept silent with our sons. When our children have chosen mates, we have asked what is the social standing or the bank account of the chosen one, when we should have asked, Is the germ cell of this person and his family free from taint of alcohol, insanity, or venereal disease? This is the ideal to be upheld in our home. We must teach our children the facts of life and hold always before them the highest physical and spiritual ideals.

The home economics extension work, with the pig club, the canning club, the shirtwaist club, has been of great help to the adult rural woman

in the solution of social and educational problems. The town and the city woman needs similar help.

The places are rare where a mother can go and get reliable, exact information on a problem of character building in her child. Where has her education been a failure, that she is not able to share the joys and pleasures of her children? Who shall teach her that she has failed in making an ideal American home if her children are not content at home, and are not willing to find their amusements in her home but must go to the "movie" or to a dance away from home for satisfactory entertainment?

I have elaborated only one of the many subjects in which the adult woman and the home need you. You can outline the problems of nutrition, clothing, child training, housing, home sanitation, home nursing, amusements, and so forth.

To teach all that the adult woman needs would require a university faculty, you exclaim. I agree with you, and I do not urge that you be experts in psychology, sanitation, chemistry, biology, preventive medicine, and a dozen others vital to the education of an adult woman; but I do urge that you select from the faculties with which you are connected such courses or parts of courses as shall give the adult woman what she needs to meet her daily problems of bearing, training, feeding, and clothing the children of the race, and make it possible for the adult women of your state to avail themselves of this priceless opportunity. We can learn to use microscopes and charts. We can be taught calories and chromosomes, proteins and prophylaxis. Many national and state associations await your call with trained workers and lantern slides and films to help you.

The Red Cross is ready with nurses to carry some of these lessons into the home. The American Medical Association has long been at our command with much that we need in this work. The National Hygiene Association is anxious and willing to give its most vital information. The United States Health authorities are trying to give needed help. Can you not coördinate all these for us and find a way to carry the message to the adult woman?

As a representative of the two million and more club women of the United States, as a member of the Association of Collegiate Alumnae, and as a member of your own Council, I beg of you to see this great opportunity to give to the world the greatest possible educational advice. The Fess Bill, if it is passed, will furnish the finance; you must furnish the brains, the plan, and the teachers.

OBSERVATIONS ON DIET IN LABRADOR[1]

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The character of the food supply in Labrador along the Straits of Belle Isle offers an excellent opportunity for observing the effects of a simplified cereal-meat diet on a large group of people for a considerable period of time under fairly constant conditions. Stefansson and other arctic explorers have described the carniverous diet of people in polar regions. A great deal of experimental work has been conducted to ascertain the effects of simplified diets on the development and health of animals. Very little consideration, however, has been given the clinical evidence offered in this region where people live on a diet very low in vitamines and where deficiency diseases occur not uncommonly. The following observations were made during the winter, spring, and early summer of 1919–1920 to determine the exact nature of the diet in this region and the incidence of diseases supposed to be of nutritional origin.

DIETARY

Conditions remain fairly constant because food supplies are ordered in the fall to last until the following summer, or even for the entire year. Anything that has not been procured before navigation closes in December cannot be had before the ice breaks up again in June. One winter mail comes via Quebec, but it requires three months by dog team, and parcels are not accepted. Small surplus supplies are kept in little stores along the "coast," but these change the amount consumed rather than the kind of food. In 1919–1920, navigation closed December eighth and did not reopen until June. The first mail steamer arrived May thirtieth, but very little freight was brought before the end of June.

White Flour. Bread made of white flour is the chief article of diet. One and a quarter to one and a half barrels of flour are consumed per person per year. Whole wheat flour would be much more wholesome in such a restricted diet, but the people do not like it. When ill and given whole wheat flour, patients take it as they would any other medicine, but they never buy it for themselves. Probably no other group of

[1] Investigation conducted on a fund provided by the Bureau of Social Education of the National Board of the Y. W. C. A., and by courtesy of the Grenfell Association.

people so successfully avoided eating war bread. To be sure, extra cereals were required to be bought with a given quantity of white flour, but these cereals were often used as dog food. This was not from any lack of patriotism, for men enlisted courageously, but bread is veritably their staff of life and they prefer it white. They come dangerously near trying to "live by bread alone." Everywhere we found good bread, whether made with hops or dry yeast cakes.

Meat and Fish. An average family of eight persons has one or two barrels of salt meat, either pork or beef, two to four quintals of salt fish, and one to three barrels of salt herring. Game is the only fresh meat eaten. Formerly it was plentiful, but of late years it has been very scarce. No rabbits were shot last winter and only one deer within a distance of two hundred miles. Partridges (ruffed grouse) were somewhat more common throughout the winter and water fowls of various sorts were plentiful in the fall and late spring. Trout are caught through ice holes in the brooks as early as May. The cod comes late in June and salmon soon after, and then the fishing season continues until November, so there is a plentiful supply of fresh fish throughout the summer and autumn. Seal meat is abundant during the first half of June. It comes as a very welcome food when supplies are scarce, but many persons who have not eaten meat for a long time have been made very ill by seal meat, probably from too sudden increase in protein. One man was seen in collapse, almost pulseless and with a temperature so low that it would not register. He recovered rapidly however, within twenty-four hours. Meats are usually stewed, often with a dumpling sort of "pudding" to take the place of vegetables.

Molasses. Molasses is used commonly in place of sugar. Most families have a small supply of sugar for guests, but ordinarily they use molasses instead. Twenty gallons of molasses per person per year is a usual supply. It is not the best molasses.

Vegetables. The more prosperous families have from one to two barrels of potatoes and one or two barrels of turnips (rutabagas). When gardens have been successful the supply of potatoes may be larger. A sack of onions is provided in a few cases but is not usual. Rice is not used generally, but a few families had from twenty to twenty-five pounds. Dried peas are eaten almost universally once or twice a week as long as the supply lasts, the usual quantity being twenty to forty gallons per family. Some families have also a smaller quantity of dried beans. The years when gardens have been successful the cabbage may

last until nearly December. Dock (*Rumex sp.*) and Alexander plant (*Smyrnium olusatrum*) can be used as greens as early as June, but they are very little eaten. Dock is plentiful. It has a lance-shaped leaf of pinkish hue when young and tastes very like spinach when cooked. Alexander plant has a flavor resembling that of parsley when freshly picked. We found both very palatable, but our patients ate them only when convinced how wholesome they are.

Fruit. Small quantities of canned fruit are provided for guests or fêtes but can scarcely be counted as an essential part of the diet. Nearly every family has ten or twenty pounds of raisins, which are used chiefly in buns or in boiled pudding served with meat and gravy. A few pounds of dried apricots or dried apples are commonly provided and eaten as jam. Occasionally a family has figs or prunes. About the only fresh fruit eaten is the berries which grow nearly everywhere. Those eaten most commonly are partridge berries (*Mitchella repens*) and another berry, unknown in our climate, called bake apple (*Rubus chamaemorus*). Sometimes they are preserved by cooking, without sugar, but usually they are placed fresh in a jar or barrel and cooked just before eaten, or are used fresh as a filling for cakes as a special treat. As berries were scarce last year, most families had only three or four gallons, while others had as much as eighteen or twenty. In regions where berries are plentiful one and a half or two barrels are looked upon as a proper supply for a large family.

Butter Substitute. Cow's butter was not used except by the very few families who have cows. The fact that it costs fifty per cent more than the butter substitute which is universally used makes it prohibitive. Twenty pounds of butter substitute per person is considered an ample supply for a year. The poorer families sometimes have as little as ten pounds per person or even less.

Milk. Condensed and evaporated milk are both used, the sweetened condensed being the most popular. Powdered milk is very rarely bought. Two cases of milk are considered a generous supply for a family for a year. The poor get only a can at a time and may have only a dozen cans during the winter. Thirteen cows and three goats were the only source for fresh milk for a scattered population of nearly eighteen hundred inhabitants. Cattle are fed so little and such poor hay that they give little or no milk in winter. Fresh milk is therefore a luxury and a rare treat even for the sick. The same may be said of eggs. A few people have fowls, but they lay only in summer. Both chickens and

cows have to be guarded very carefully to keep the dogs from killing them. This danger, together with difficulty in procuring hay and grain, and ignorance as to how to make them productive, have kept the fishermen from having cows and chickens. No eggs are imported. Egg powder is used sparingly in making cakes. Fresh milk is always scalded immediately to facilitate the rising of the cream. Practically all the cream is used for making butter, and only skim milk is employed for other purposes.

Tea. Every family has from twenty to forty pounds of tea per year. It is the universal beverage, and two or three cups are taken at every meal by young and old. Tea is usually boiled and is very strong. Five or six meals may be served a day, but bread and butter and tea sweetened with molasses are the basis of each, and often this is all. Meat is eaten usually only once or twice a week, as are also salt fish and dried peas.

By February people with scant supplies had little left but flour and tea. Some time in April supplies of potatoes and rutabagas were exhausted. Condensed milk, salt meat, and even salt fish were getting very scarce. In May everybody's supply of everything but flour was low or exhausted. New summer supplies did not begin to arrive until late in June.

DISCUSSION

We have here a diet chiefly of cereals. There is an excess in carbohydrate and at least a partial deficiency in vitamines and suitable protein. Growth in the children is retarded, more markedly in the poorer families. Deficiency diseases were less common than would be expected as the result of such a deficient dietary. Only isolated cases developed five or six months after fresh food was lacking in the diet, and two or three months after the supplies had been cut down to a minimum. An increase in general nervous instability was evident by the end of March. Psychoses and insanity became much more frequent. Most of these patients recovered completely on proper diet. Night-blindness[2] became common during April. A few cases of beriberi,

[2] *Editor's note—The following extract from a letter, written by Dr. Appleton to Dr. C. F. Langworthy since the foregoing article was accepted for publication in the* JOURNAL, *gives Dr. Appleton's more recent opinion about the cause of night-blindness:*

"I believe, after going over my notes time and again and changing my mind several times, that night-blindness is a negative after-image following long exposure to the dazzling glare of the sun on the snow. At first the neurotic element seemed important, because it came in April when nervous instability seemed the predominating result of poor diet; in regions where deficiency diseases were rare; and occurred not in families or exclusively among

edema, xerophthalmia, scurvy, and pellagra were seen in May. The substances in food necessary for promoting normal growth and health must be only partially lacking, and so it would seem that they are much more widely distributed in food than is usually supposed. Vitamines are probably provided in part by the wild berries, small quantities of condensed milk and vegetables, and molasses. The importance of tea in the diet, together with the relative scarcity of deficiency diseases following such a restricted diet, leaves little doubt that the vitamines present in tea are of considerable value.

It was interesting to find that spruce beer, made from young spruce tips, is a popular beverage in spring. Early explorers in this region are said to have prevented scurvy by using a pine infusion. "Beer" made by pouring hot water over the broken spruce tips is a mild and pleasant drink, whether fermented or unfermented. When made by boiling, however, it is very bitter but is popularly considered an excellent old-fashioned "spring tonic." Another very surprising and interesting finding was the fact that popular belief attributes curative value to raw bird's liver for night-blindness. Careful investigation traced this belief to tradition and not to any modern medical advice.

the very poor but among groups of people. A purely neurotic etiology is excluded by the fact that the night-blindness occurs almost exclusively among men and that it responds readily to any treatment; only two cases could be found to have occurred in women.

"The bird's liver treatment seemed to point to a real deficiency disease, but in most cases one liver was enough and more were not taken. If this were a deficiency disease, one would expect to find it in the region where beriberi and xerophthalmia were common, but it was most common in a village where these diseases were absent. Its frequency increased during April or early May and then decreased, although the scarcity of food became more and more acute and was not relieved until June. It was coincident in season with snow-blindness and, like it, disappeared with the melting of the snow. The two did not occur in the same person or following one another. Night-blindness does not occur during the dark winter days, or after dull days, or in summer when the ground is free from snow. It varies in intensity and is usually intermittent, probably dependent on the brightness of the day or the amount of exposure. It is most common in young adults engaged in out-of-door pursuits; women rarely go out, and so escape. It is described as a blindness that comes on at twilight; the eyes 'feel weak all day and then there is a cloud at night.' The person affected can see a light no matter how blind, but can see nothing else. Convalescents here are similarly blind after reading too long. Any one can experimentally get a like after-image by looking at a white sheet or book under a strong light at night.

"The treatment cures, because the patient who submits to treatment remains in the house. Night-blindness must be a retinal fatigue rather than an inflammation, as in the case of snow-blindness in which the photophobia is extreme. Poor diet may increase the probability of seeing after-images just as fatigue does."

STUNTS OF HOME ECONOMICS WORKERS

WINIFRED STUART GIBBS

It goes without saying that we are proud of the manner in which home economics has developed. Since the days when "domestic science" invited its first followers to consider the delights of being "cooking teachers," and "domestic art" beckoned alluringly to the sewing machine, we have travelled far on the road to professional consciousness. As a group, however, we do not yet realize to the full our potential power. Flushed with the victory of our well-fought fight for academic recognition, we may go down to defeat if we array ourselves against, or even fail to support, certain forces now making themselves felt. Obviously, we cannot all be brilliant technicians in food or textile laboratories, but let us not forget those other laboratories, where are being worked out problems of human, rather than of chemical, relationships. Moreover, is it not in these same larger social laboratories that the work of chemist or pedagogue is destined to reach fullest fruition, and receive adequate appreciation?

The coöperation between home economics workers and social service is one of the earliest examples of this. No one questions the breadth of common interest between home economics and forces that are socially remedial. Visiting housekeeping, hospital dietetics, settlement classes, these are but a few of the tested lines of team work open to the home economist. We are just beginning to realize, however, what it may mean to work in the largest field of all, that is, with the great and unorganized masses of the housekeepers of the nation.

An increasing number of home economics specialists are taking their training and scholarship into the so-called "commercial world" and are serving as connecting links between their profession, the manufacturer or dealer, and the public. This is the story of one of these "stunts" in home economics, written in the hope that other workers may be induced to tell other stories of yet other stunts.

The advertisement of a large milk company in New York came under the eye of a home economist who is by way of liking to seek new trails. "The man who wrote that," she said to herself, "had the right idea, but did not know how to use it to best advantage. Perhaps I can help him." So much for the initial contact. It was an easy matter to convince the company that to organize their publicity on an educational basis would be "good business." The home economist was quite

thrilled at the thought of counting her students by the hundred—she did not guess that it was to be by the thousand—so the experiment began.

Since the underlying principle on which the work was based called for unsolicited cooperation from the public, it was decided to open a small office in one of the stores operated by the company for the sale of dairy products. The store chosen was in up-town Manhattan, where the patronage was made up of well-to-do, English-speaking families with young children. Later, if the experiment should prove successful, the worker argued, a center might be established in a down-town store. At first, however, it was vital to the success of the plan to have instant and complete understanding from those who came to the bureau.

A registered nurse, in uniform, was stationed in the prettily fitted up show window of the store. A scale stood near. A weight chart hung over the nurse's desk, ready to record the stories of progress to be made toward normal weights. A card that read as follows was sent to every family living within a given radius:

TO ALL OUR NEIGHBORS

Perhaps children in your family are already drinking milk. We hope so. If you are interested in having a special dietary, planned to meet the needs of any child in which you are interested, you may call at —— ———— Avenue, at any time between 9.30 a.m. and 5 p.m.

The women who have charge of the bureau have had wide experience in feeding children. The director has taught at a well-known university; the nurses are graduates of well-known schools.

Yours for strong citizens,

———— COMPANY.

Within a week children were coming in unending streams, and at the close of the second month, the bureau has on its books the record and history of fifteen hundred children. This number is limited only by the fact that the nurses are turning away new applicants, until such time as the staff shall have made plans for proper analysis of data, as a basis for developing the work.

All who are interested are given an announcement outlining the information the bureau has to offer, and the educational contests that it proposes to conduct. Each child is given a weight card, with the number corresponding to his number on the wall chart, so that the nurses can see at a glance just what to do next.

At the close of the three-months' period allotted for testing the public interest, the bureau is deciding on future policies. The three main lines of endeavor are: the neighborhood work centering in the bureau; a new neighborhood, where undernourishment is a definite problem; outside contacts in schools.

Before anything further could be developed it was necessary to put the work on the professional map. How to do it was a nice question in human and professional relationships! Finally, an invitation conference was called at the Academy of Medicine, as being neutral ground, and to this meeting were asked representatives of Columbia University, the Child Health Organization, the Diet Kitchen Association, the Department of Health, the medical profession, the Dietitians Association, the Home Economics Association of Greater New York, the Association for Improving the Condition of the Poor, the Charity Organization Society, and various other organizations. The ensuing discussion marked a point in the development of home economics. The fact that such authorities were interested to discuss the matter at all meant that the profession is a living force in the world of social activity.

Just what form the professional coöperation will take has yet to be worked out, since both the worker in charge and the various consultants realize that it must be done carefully. The fact remains, however, that there will be coöperation, the director of the project holding herself responsible to three groups: the company, the professional group, and the housewives. This means real team work.

Meantime, a fellow profession has, it seems to some of us, a message.[1]

"Let us have no illusions about this thing we call a profession. . . . The attainment of recognition may . . . . . bring with it a self-satisfaction, an intolerance of new ideas and new blood that is the essence of destructiveness. It was this which happened to the medieval guilds.

"Back of all the great professions there is a tradition—of men, of methods, of ethical standards. Partly it is that tradition which gives them dignity, which makes them greater than a mere aggregation of individuals. And partly also it is that tradition over which constructive evolution stumbles, in the face of which new ideas falter. . . . If ever we reach the point where new ideas are frowned upon, where individuals for their lack of orthodoxy are denied a hearing, where we are static and not dynamic—then we might better never have begun at all."

[1] The profession alluded to is social work. The message is from *The Compass* (March, 1921), published by the National Social Workers' Exchange, 130 E. 32d St., N. Y. City.

RELATION OF BOYS' AND GIRLS' CLUB WORK TO THE RURAL HOME AND COMMUNITY[1]

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Boys and girls together are the group through which those engaged in the extension of farm and home practices believe that they can build most permanently in raising standards of living, lessening home labor, and developing leadership whereby the rural family as a whole may be assisted to a higher plan of "self help" and community consciousness. Young people are easily molded in right habits and standards, and are the group reached on the threshold of the most intensive period of human usefulness as farmers and homemakers. Through their enthusiastic participation in helping to solve home problems they themselves acquire an intelligent and sympathetic appreciation of rural home life.

The methods used in the club activities are in keeping with the principles underlying the agricultural extension system that reaches every part of the United States. The system has been organized by the United States Department of Agriculture in cooperation with the land-grant colleges and county extension organizations in accordance with the provisions of the Smith-Lever Act of 1914 and other acts of Congress and state legislatures. Demonstrations on the farm, in the home, and in the community, by men, women, boys, and girls, are the chief means by which this work is done. It is backed by the research systems of the state agricultural colleges and the United States Department of Agriculture, and brings to the farmers and the homemakers the new information that is deemed practical and useful. By conducting a particular phase of the farm or home business and putting into operation methods that have been found to be practicable, boys and girls are enabled to aid materially in solving economic problems and to raise standards in the community in a single year.

For example, in some sections of the country the poor quality of the homemade bread and the insufficient amount used is a community problem of vital importance, for bread is in the American diet not only the proverbial "staff of life" but one of the best foods for keeping down

[1] Published with the permission of the Secretary of the United States Department of Agriculture.

the cost of the diet as a whole. Consequently in the homes of club members demonstrations have been conducted through which both boys and girls and their families have learned what good bread is and how to make various kinds of it. For instance, the five thousand Minnesota boys and girls, who during 1920 belonged to bread clubs, are bound to have an influence in their homes and communities, just as has a club of twenty Indian girls who taught their mothers how to make yeast and quick breads. Moreover, bread club work, like all the homemaking activities, gives club members an opportunity to assume greater responsibility in the farm home. During 1920, over four thousand bread club boys and girls did all the baking for their families as naturally as did the North Dakota girl who wrote: "Oftentimes it is necessary to wash clothes and make bread on the same day. It is hard for mother to do both, so I make the bread." Foreign-born boys and girls in rural districts are especially interested in bread clubs. They rarely miss a meeting and often bring their parents with them, thus making club work of benefit in the broad movement of Americanization. "I cannot tell half what club work means to the people here", writes the judge of a recent county bread-making contest. "The best loaf of bread was made by a little Austrian girl who never had white bread in her home until she joined the bread club. Three of these little Austrian girls from the same community had never seen a train before, or an electric light, or a moving picture show. They stayed in an American hotel in a real American bed and wore for the first time the nightgowns that they had made in their club work. 'They could scarcely sleep,' their leader said, 'thinking how funny they looked in their long white robes.' One of these girls made the best loaf of bread. You are doing a wonderful work in the foreign homes of this northern country."

The public demonstration team work is proving to be exceedingly effective in extending the influence of the bread and canning clubs, for it is one of the best methods of interesting adults. They are often drawn to such demonstrations by their general interest in boys and girls, and nearly always go away exponents of the practices taught. During 1920, in the North and West, over two thousand bread club girls gave such public demonstrations.

Meal preparation clubs also have an influence on the life of the home and the community through the planning and serving of well-balanced meals at home and of hot lunches at schools. The boys and girls learn

something of the principles of food selection and why some foods are especially important in the diet. For instance, "the value of milk used in the preparation of soup and cocoa has been strongly emphasized," writes a state club leader in telling of the hot school lunches prepared and served by her boys and girls. Nearly 250,000 of these school lunches have been prepared in the North and West during 1920, and about 30,000 meals planned, in addition to the preparation of over 200,000 foods for club members and their families.

A few years ago, canning in the average home was done on a small scale, and with only a few foods. Now, home canning of meats and vegetables as well as fruits has won for itself a distinct place among the few remaining home industries. The canning clubs have played an important part in this by introducing labor-saving methods and demonstrating the use of pressure cookers and other improved equipment. Also during the war, because of methods already tested, canning clubs were an invaluable aid to the food conservation program. Incidentally, the girls and boys doing this work have gained in responsibility and initiative. Many girls, for instance, do all the canning for their homes, and it is not uncommon for a club girl to be recognized as an authority on canning in her neighborhood and even to have her services employed. Elizabeth, a Colorado club girl known throughout her county as the most successful canner of meats, has earned an average of $3.50 a day by canning for the women of her community. She takes her equipment, including a pressure cooker, with her and often spends several days in one home.

Important though it is to improve household practices in the preparation and use of foods, boys' and girls' club work has not stopped there. When the close of the war lessened the need of canning demonstrations, the clubs began to turn more of their attention to clothing. The high price of textiles and labor, especially in ready-made garments, made clothing an economic problem, and the clubs set about doing what they could to solve it. The community programs under which they work are so flexible that the change from canning to clothing demonstrations was made without waste of effort. The different clubs have of course taken up various phases of the problem, according to their needs. Some members have made inventories of their wardrobes, estimated the cost of the clothing they would need for one or two years, and set as their goal what they thought they could accomplish within that period. Others, interested in making the best use of what they already had,

have demonstrated the care and repair of clothing, remodeling, dyeing, and even laundering.

Practically all clothing club girls do their own mending, and many keep the clothing of the entire family in order. Also many clubs have during the past year made profits by selling aprons, rompers, underclothing, and other easily made garments to the women of their communities. Good machine work and intelligent use of commercial patterns have been demonstrated in nearly all the states. Many girls are also demonstrating the essentials of appropriate dress. As a consequence, the girls learn what are correct standards of dress and personal appearance, how to judge the value of well-made garments, and how to exercise economy in buying. The success of these clothing demonstrations can be seen where the work has been under way for some time, in such results as improvement in the quality of materials and style of dress of country boys and girls, increased self-respect on their part because of better garments worn, a change in the character of materials handled by the country store, and better care of clothing.

The latest development in club work is partly an outgrowth of the clothing demonstrations and has great possibilities in adding to the attractiveness and comfort of the rural home. For a long time club members have been making curtains, pillow cases, towels, and dresser scarfs for their bedrooms, but not until this past year did they realize that they could transform their entire rooms. Clubs of these girls have adopted as their slogan, "Own Your Own Room." The leaders find that the girls are intensely interested in rearranging and redecorating their rooms, selecting and refinishing furniture, and using materials on hand to the best advantage. The club members are not urged to make dressing tables from soap boxes or wing chairs from barrels. The leaders assume that the girl on the farm today, either has furniture which a little work will make more attractive, or is able to buy new pieces. Especially is this true of the club members who have money earned in their other club activities. The wide field of household decoration and sanitation is thus opened to these girls. After a 4-H club girl has wrestled with the problem of producing a pleasing effect in a little bedroom with a sloping roof, she is anxious, and probably her mother and brothers as well, to see what may be done to solve similar problems throughout the house. The results of pig and calf clubs have shown the benefits of developing a sense of responsibility and ownership in the farm boy. The "Own Your Own Room" clubs are

doing for the farm girl what these stock clubs have done for him. Moreover, leaders feel that, if this club activity can bring, even in small measure, a fuller appreciation of farm and home life to rural boys and girls, it has paid big dividends on the energy and money expended.

Boys' and girls' club work has even deeper significance than the immediate results show. In far too many cases the only training that rural girls receive in homemaking is through organized club work. The situation described by this club leader is typical of that in many communities: "The majority of our rural girls marry as soon as they complete the eighth grade, or leave school to marry, and most of them know absolutely nothing about cooking, housekeeping, or anything that pertains to homemaking." Statistics show that about fifty per cent of rural girls leave school between the ages of fifteen and nineteen, and fourteen per cent of these girls marry very soon after leaving. At present, a very small percentage of the rural schools that these girls attend have courses related to homemaking. Leaders in club work are therefore making a special effort to reach such girls and give them the fundamentals of nutrition and the basic principles of good homemaking practices. Where there are county club agents, it has been possible to reach twenty per cent of the farm homes.

The economic returns to club girls from their work in gardening and poultry are proving to be not only a large factor in solving immediate problems of clothing, education, and other wants, but also a boon to former club girls who, in partnership with their husbands, are pooling all their resources to buy a farm of their own. According to statistics, over fifty per cent of the farmers under thirty-five years of age are tenants.

Nor does the club work with girls stop with the gardening and poultry. During 1920, in the North and West, over five thousand girls were enrolled in live-stock and crop clubs. Leaders encourage rural girls in these activities, for it is believed that such work broadens the sphere of influence of the girl in her future rôle of wife and mother. She is then able to appreciate and discriminate justly in attacking and helping to solve rural problems that arise, establishing confidence in others, and becoming herself a recognized force in farm and home development. Likewise leaders encourage rural boys to participate in club activities related to homemaking, so that through this common effort of boys and girls for farm and home betterment there will develop a sympathetic understanding and common interest in the farm and home.

The quality of all club work is raised by providing special means for giving publicity to the demonstrations conducted, encouraging and rewarding work well done, and including the social activities that make a strong appeal to the adolescent. There are, therefore, club records; various contests; club festivals, hikes and tours, when each member observes the work of all the others; achievement day meetings, when a premium is placed on the successfully completed demonstration; and charters, given to those clubs that meet the requirements of a standard club.

The outstanding features of boys' and girls' club work that play an important part in rural home development and at the same time are of direct benefit to the boys and girls themselves may be briefly summed up as follows:

In all extension work, it has been recognized that permanent progress toward better agriculture and homemaking is directly dependent upon the kind and amount of leadership developed. Boys' and girls' club work is a simple and efficient system for developing rural young people into such leaders. First, it interests boys and girls through a community program of work. Then it helps them to carry out the program, and this results in their serving the community. Scores of former club members are now community and county leaders in the county extension organizations of the North and West. In Norfolk County, Massachusetts, alone, eleven leaders of the canning and bread clubs during 1920 were former club members.

The interest gained from becoming a demonstrator in some homemaking club activity has led thousands of girls to take systematic instruction in homemaking in secondary schools and colleges, often paying their own way in part with money earned through club work. During 1920, in the North and West, 3383 club members attended short courses in agriculture and homemaking at the state agricultural colleges, while 730 club members won scholarships. State club leaders also reported that over 1800 former club members were taking the agricultural and home economics courses in the state agricultural colleges.

Moreover, as has been shown, such work as that provided in the homemaking and agricultural clubs gives rural boys and girls experience that they can capitalize to good advantage in their future work as farmers and homemakers. In addition, through the club group, there is developing among the rural young people, initiative, vision, and a home and community consciousness, which assures a happier, richer, and more contented rural home life.

PROBLEMS OF THE DIETITIAN IN THE CARE OF OUT-PATIENT POOR SUFFERING FROM DISEASES OF METABOLISM[1]

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There are a number of problems that present themselves in the care of the poor patients suffering from some disturbance in metabolism. Some of them are chronic cases and they tax the patience and generosity of the physician, the dietitian, and the social welfare worker. They are old people, or elderly people, usually, and the professional welfare worker feels rather disinclined to exert herself indefinitely for their sake. The question that I shall endeavor to discuss borders on the domains of social charity, dietetics, and medicine, and I ask your indulgence if I diverge from the caloric value of food and a well-balanced diet.

There is a tendency on the part of the welfare worker to react with little interest in the case of a chronically ill, elderly patient. It is true that from an economic point of view, it is poor business to invest money in the care of such sick. They never become productive members of society. They will, most likely, always remain a burden upon the charity organization. Why bother with them, when there are acutely ill patients, young and robust, who can be helped for a little while and who then become self-supporting? The injustice of such a tendency is great and self-apparent and yet it is ever present.

These patients are derelicts on the road of misery and poverty. They are veterans of the battles of life who have lived industriously until age and disease have made them dependent upon our charity—so often wanting in us. To neglect them is to show a sense of utter lack of social responsibility. It is as if a people were to neglect crippled war veterans who have sacrificed their all for our safety. Such a condition of affairs is intolerable and should be remedied.

How can one treat an old diabetic patient, who, not only has not the wherewithal to purchase the special food necessary, but has not the very bare means of subsistence? What purpose is it to give advice as to diet

[1] Presented at the Third Annual Meeting of the American Dietetic Association, New York, October, 1920.

and medication when the patient does not know where to get his next meal? Suppose this patient is referred to the social service department. After due investigation he is helped for several weeks, and then the help stops, for there seems to be no end to the assistance to be extended.

I have proposed that a certain budget be assigned to the social welfare department to be used by the dietitian at her discretion. When such cases do appear in the clinic, the physician, the dietitian, and the social worker will not feel so helpless.

The dietetic treatment of the poor must be especially circumspect. It is my lot to attend to a clinic serving the very poorest of the poor. In advising a diet for them, the physician must have the following facts clearly before him: the economic status of the patient; the foods that can be most economically purchased; instruction of the patient by the dietitian in the preparation of foods; continued and repeated examination of the patient—his state of acidosis or sugar tolerance in diabetics, his degree of edema and nitrogen retention in nephritis; investigation of the home life of these patients.

The economic and financial condition of the patient must be known. Those dependent on the support of their relatives must be urged to follow implicitly the directions given to them. It is advisable, occasionally, to speak to the relatives who are supporting the patient and impress them with the desirability of following the dietetic regulation, and with the health penalty that will follow disobedience. Amongst the poor, especially the Jewish poor, the family ties and the family affections are very strong, and these words of caution will help very much.

When the financial status of the patient is such that he or she must become a burden upon charity, we must see to it that organized welfare work accomplishes its duty. The arrangements must be made with the "baker, the butcher, and the candle stick maker" to have the necessary food ingredients supplied to the patient. One point must be remembered—and I was taught this by a social service worker—that more than necessary must be given to the patient if she be a mother, for, otherwise, the mother will share with her children and will herself abstain from the food in order to see that her children have enough.

If something suitable can be found for the patient to work at and help in earning his subsistence, well and good. If not, it is the duty of the state or of the welfare department to see to it that proper support be extended to the ailing individual.

The dietitian must see to it that, in carrying out instructions of the metabolist in regard to food ingredients, only such vegetables and other foods are recommended as are in season and are to be obtained easily and cheaply. In this regard the dietitian serves her main function. And not only this, she is to visit the home of the sick or have classes in the hospital where the sick can visit and be shown how to cook the vegetables and other food properly and palatably.

May I, at this juncture, point out to you the religious factors in the preparation of a diet? I am especially able to discuss the diet question from the orthodox Jewish viewpoint. You know, for example, that Catholics refuse to eat meat during the Lenten season. So do the Jews have certain religious regulations in the foods that are allowed to them. The more miserable and poor a person is, the more there is implanted in him all superstitious and religious observances. He seeks his consolation in the church, the synagogue, or in the various medical cults. At that time one cannot teach the patient science or logic. One has to recognize these prejudices as one recognizes varying tastes, and cater to them. To ignore these scruples or belittle them is to work harm to the patient and animosity toward the dietitian.

There is an opportunity for dietitians in the Jewish hospitals. It seems that there are very few Jewish women who enter the profession of dietetics. In order to be a dietitian in a Jewish hospital or in a Jewish community, it is essential that the religious laws of the Jews be known by the dietitian. It is not necessary that she be a Jewess.

All dietetic ritual laws of the Jews are based upon the fourteenth chapter of Deuteronomy. If you, at your leisure, will read through Deuteronomy you will become expert in the Jewish ritual, and therefore can help us very much, in all the communities where the populations are dense, in solving this problem.

And remember this especial injunction: "Thou shalt not seethe a kid in its mother's milk." The Talmudic explanation of this is—you may be interested in this subject—that it seemed cruel to Moses to take a calf and seethe it in its mother's milk, and he therefore forbade this practice.

The rabbis, in explaining this, say that in a civilization like that of the present time one cannot know which is the kid and which is the mother's milk, and therefore they have forbidden the mixing of flesh and milk, and not only the flesh and milk, but flesh products and milk products. For example, you may not take a piece of butter on your bread

when you eat meat. Nor may you take a glass of milk when you eat chicken.

One cannot see any logical relation between chicken and milk. There is no relationship there, but that is the ritual, and it is a very thorough ritual, and you will find millions of people here in America who would rather starve than eat anything that will be a mixing of this diet.

May I repeat, there is a crying need for dietitians who understand the Jewish ritual. It is not essential that they be of the Jewish faith as long as they are cognizant of the Jewish prejudices. This is especially the case with visiting dietitians and with those who are to become connected with orthodox Jewish hospitals—in contra-distinction to the reformed Jewish hospitals.

One scientific point I should like to make. In visiting the sick, especially the diabetic sick, I have noticed that the dietitian gives instructions that are not altogether in consonance with the laws of metabolism. In the advice given to diabetics one must remember that, while it is desirable to keep the patient sugar free, it is especially essential to keep his hydrogen-ion concentration, his acidosis, normal. This can only be done by limiting the fat intake. For, while the diabetic individual is characterized by a disturbance in the metabolism of carbohydrates, he is also, due to this fact, suffering from an improper break down of the body fats with the resulting formation of the acetone substances, which are so toxic. The patients, therefore, must be cautioned against the indiscriminate use of fats.

CLASSICIST AND ROMANTICIST

A CALOR-EPIC

This is the tale of the calorie, wrapped in our liver and bacon,
Hidden away in the bean and spurning the succulent celery.
Large is his stature or small, and how shall we fashion his dwelling?
Why is his place in the sun, and why is he leagued unto nations?
Surely the gods have repented the evil they wrought on our fathers,
Given us this calibration to measure the tube of Prometheus.
Probably one quiet day, when feeling quite bored with Olympus,
Jupiter looked toward the earth and, snitching a test tube from Vulcan,
Dipped from the spring of the gods a portion that equaled one cc.,
Laid it away in the sun, and then called to a Standardized Mercury,
Saying, "Just watch this, old man; from fifteen, centigrade it to sixteen."
Thus was the calorie born, but so small seemed that heat-unit infant
Straightway they fashioned another and made it a thousand times greater.
"How can we take this to man? How *can* we deliver the measure?"
"Call me three slaves," said the god, "let them henceforth govern the cosmos.
"Summon the Proximate Principles: Fat, Carbohydrate, and Protein.
"Theirs shall the task be to carry our marvelous prodigy earthward."
So was it done, but before they departed, the three mighty magnates,
Rose from the spot a fine mist and enveloped Jupiter's throne room.
Chilled by the air of Olympus it fell in the form of fine droplets,
Over the marble it splashed, and the gods sought their raincoats and rubbers.
Jupiter's knees then it clasped and moaned with disconsolate weeping,
"Father, the giver of calories grieves, unrewarded, forgotten;
"Best of Olympian Springs and most chemically pure of all waters,
"Shall these new rich ones ignore my essential presence among them?"
"Dear me," said Jup to himself, "I sure have been mighty forgetful,
"My, what a row I'm provoking if three have all of the power,
"Laborers aren't what they were, and we can't have strikes on Olympus."
Gravely he pondered while stroking his beard and his prominent forehead
Said then these words on which hung all the nutritive fate of the nations,
"Water, in lands wet or dry, be you of all foods an essential;
"Never without you shall function Fat, Carbohydrate, or Protein."
This is the tale of the calorie, Unit that ruleth all empires,
Bolshevik he of the Bolsheviks, commonest he in all Communes,
Shaping the outcome of wars, unshaken though governments totter.

M. H.

THE LAY OF THE VITAMINSTREL

The times are long and changed the earth
Since calories had celestial birth;
Our trust in Proximates grows cold,
That standard's now infirm and old.
No longer simple calories
Can keep us free from dread disease,
Not tho' von Pirquet conjure them
With novel measurement and Nem.
The proteins in the bean and wheat

We find are sadly incomplete;
Naught wreaks to put in overtime
Consuming iron, phosphorus, lime;
Add cellulose and ample water—
Still we don't function as we'd oughter.
Awhile we thought the wicked lack
Lurked on the amino-acid track,
And fought with protein building-stones,
The same as in our flesh and bones;
The colloid and the frisky ion
We've sought to master and rely on;
And the bacillus known as Bulgar
We've worked till buttermilk is vulgar.
In kitchen, hospital, and lab
The learned seek the fiend to nab.
Science cuts down the barnyard quorum
With polyneuritis gallinorum;
Imprisons many a guiltless rat,
First makes him thin, then makes him fat;
While scores of humble student flunkeys
Attend on guinea pigs and monkeys.
It seems, poor beasts, a scurvy trick
To make you xerophthalmic, sick,
But not in vain your sufferings,
You rickety, neuritic things!
At last, across our ignorance
We see a mystic Something dance.
Is it substance or property?
And is it one or twenty-three?
(Today it's three—no doubt before
They print this, 'twill be several more!)
Why lurks it in the butter-pat
And not in lard that's just as fat?
Why in the Chinamen's queer soy
And not in Boston's weekly joy?
The sailormen of olden times
Got what from lemons, not from limes?
May we feed babies canned tomatoes?
And shall we bake or boil potatoes?
And when we know just where to claim 'em,
Then say, ah say! What shall we name 'em?
O dire confusion! Some there be
Who term it food accessory;
Still more wax fierce and voluble
For fat and water soluble;
While others preach the A, B, C,
Of nutritive deficiency.
Does *amin* fit? Not on your life!
Still let it end the wordy strife.
The classic fogies quit the scene,—
All hail the romantic Vitamine!

H. A.

FOR THE HOMEMAKER

THE RESPONSIBILITY OF THE CONSUMER FOR FOOD STANDARDS AND PRICES[1]

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Nearly every person in the United States has been made familiar in the last fourteen years with at least the name "Pure Food and Drugs Act of June 30, 1906." This federal act operates only in interstate and international commerce in food and drugs. Any product made, sold, and consumed within the boundaries of a single state, therefore, cannot be held amenable to this law. For the protection of its citizens, then, each of the states has enacted food laws of its own, most of them similar to or identical with the federal law, some less stringent than that law, others more so. The result of these varying regulations is sometimes rather confusing, and certainly the expense of the manufacturer of any widely sold food is greater than if more uniformity prevailed. There has recently, however, been appointed a joint committee on Definitions and Standards made up of federal and state food officials, which is paving the way effectively for the adoption of uniform food laws among the states.

As consumers we are interested in this uniformity chiefly for economic reasons. A food product which can be put up in one container under one label with one standard of content for the whole country is apt to be cheaper than one which has to be varied in order to be legally salable in various states. It is the object of this discussion to point out the definite cost to the consumer which all food law protection has involved.

The "Karo" case. An example of the effect of diversity in the state food laws may be cited from the bitter plaint of the Corn Products Refining Company of Chicago. This large and influential corporation markets a great variety of food and other materials made from Mississippi Valley corn. The starch of the corn when subjected to the action of strong acid

[1] Reprinted from the *University of California Chronicle*, July, 1920.

at a given temperature for a given length of time hydrolyzes, or breaks down largely into glucose, although the less completely hydrolyzed products, dextrine and maltose, are present also in considerable quantities. Glucose is an entirely innocuous substance, of equal food value with any other sugar, and when sold under its proper name, and for the low price that it should command, is an honest and valuable foodstuff. However, a prejudice against glucose as such exists in the public mind, for the reasons probably of its supposedly artificial origin from starch and its lack of sweetness when substituted for cane sugar. The Corn Products Company consequently desires very much to obviate the use of the word "glucose" on the label of their various table syrups. The fancy name "Karo" was adopted for one of these syrups purposely to abide by the federal law which does not require a statement of ingredients if a package food is offered under a distinctive proprietary name. But many of the states do so require an accounting. Thus, in Kansas, Karo has to be described as such a per cent glucose and such a per cent cane syrup; in Wisconsin it is necessary merely to state that the product is glucose with cane flavor; in Virginia the percentage has to be given; while in most states the description "corn and cane syrup mixture" is sufficient. This case has been fought out in the supreme courts of at least two states with a favorable decision for the Corn Products Company in that the words "corn syrup" may be used instead of the word "glucose" on the label.

But where is the consumer involved in this case? His prejudice against the word glucose, his knowledge of the possible cheapness of any glucose product, and his intelligent criticism of the high price of a glucose syrup explain the determined campaign of the manufacturers for the name "corn syrup."

The costs of long-continued litigation, and of the advertising campaign to popularize the mysterious natural corn syrup, assuredly do not lessen the price of the commodity itself. State food laws uniform with each other and with the federal law would obviate the whole struggle, since one decision would settle the matter for the whole country.

The objects of food laws. Food laws, state and federal, have two objects: (1) the protection of the public health, (2) the protection of the public pocket book. Under the first of these, which we may call the hygienic aspect, may be grouped four main varieties of protection, having to do (1) with the condemnation of unclean or putrid foods, (2) with the forbidding of the use of injurious preservatives, coloring, or bleaching agents, (3) with the spread of disease germs, (4) with the devitalizing of foods.

The food inspection. The federal meat inspection regulations are the best example of the first variety of protection. The inspection of food animals before and after slaughtering, of sanitary conditions in packing houses, and of the finished meat products is now carried out for the most part efficiently and honestly. Canned goods, eggs, fish, and milk are the chief materials which the food officials must watch for indications of decomposition and consequent danger to health. There is practical unanimity of opinion among consumers and inspectors alike as to the edibility of such spoiled goods, and the manufacturer is likewise often civic-minded enough to be unwilling knowingly to sell such food to the unsophisticated purchaser. The reported cases of so-called "ptomain-poisoning," "sausage and shell-fish" poisoning are far fewer now than ever before, chiefly as a result of the activity of food inspectors.

"Swells" and "springers" as spoiled canned goods are called, are unfortunately sometimes removed from the tell-tale bulging can, sterilized, and recanned for the market. This practice is difficult of suppression, and can be detected only by constant factory inspection. Spoiled eggs are broken, packed in tin cases at low temperatures, and sold to bakers as "cooking or liquid eggs." The food officials have recently been rather active in prosecutions for this offense. Spoiled butter is reprocessed or renovated, and placed again on the market, and this is allowed under proper labelling. According to a recent cartoon in a San Francisco newspaper, ancient fish painted fresh every day or two, given new glass eyes, and a coat of varnish might be sold as perfectly fresh to the gullible housewife, if it were not for the watchful care of the food inspector.

In some cases there may be a question as to the entire justification of the wholesale condemnation of slightly fermented foods if proper sterilization has been carried out. Certain canned foods might be reprocessed and sold with an honest description of their history and at an appropriately low price probably without danger to the public health. This is one of the economic as well as hygienic aspects of the food problem which deserves intelligent consideration. A case in point is the reprocessing of butter. If the consumer can be made to understand the possibilities and also the limitations of such conservation, the first step toward a return to rational economy will have been taken.

Further, the condemnation of damaged but usable goods by food officials for the reason that producers and jobbers, if allowed to sell the food at all, will demand full prices therefor has recently been the subject of some discussion by state authorities. The writer recalls the case

of a large consignment of rain-damaged prunes of the crop of 1918, some of which the State Board of Health ruled might be sold under that name, although at first the decision had been for condemnation of the whole lot to use as hog feed only. Although these prunes were eventually sold at very slight reduction below the high market price, the total food available for home use and for export was thus increased.

Botulism. Of peculiar interest to Californians is a newly emphasized type of food poisoning known as botulism. This is caused by toxins produced by the *Bacillus botulinus*, formerly thought to thrive only in meat or other protein-rich foods. In recent years its deadly presence has been proved in a fairly large variety of canned vegetable foods as diverse as string beans, apricots, ripe olives, asparagus. This organism seems to exist in a wide variety of places, but to occur more frequently on the Pacific Coast and in California than in any other part of the United States.

When the spores are present in food canned by the usual household method or even by the more effective commercial process, their activity in toxin production is unimpaired, and the eating of even the smallest portions of such food usually results fatally. To be sure, cases of botulism are extremely rare, when the quantity of canned food consumed daily is taken into account, but active research into the occurrence and means of prevention of even these few cases is now being carried on. Wide diffusion of information as to the possibility of such poisoning should become part of the duty of state and federal food officials, so that all canned food showing traces of decomposition may be rejected immediately. Since it is believed that, if canned food is heated to the boiling point for five to ten minutes before being served, the danger of botulism is greatly lessened or entirely removed, the effort should be made to spread this information in order that this safeguarding habit may be adopted by the largest possible number of consumers.

On the whole the protection of the public health from dangers due to food grossly contaminated by filth and decomposed by the action of micro-organisms may be said to be fairly adequate.

The use of preservatives. The second hygienic aspect of the food laws, that concerned with the regulation of the use of added preservatives, artificial coloring, flavoring, or bleaching agents, presents a more complicated condition. Many interested consumers are familiar with the famous contest between authorities as to the harmlessness of some of these substances. Dr. Harvey Wiley began the campaign against preservatives with a series of experiments upon human subjects, the "poison

squad," the results of which he declared showed conclusively the danger of the use of any preservatives added in any amount whatever. The substances under consideration were borax, boric acid, salicylic acid, sulfites, or the "sulfuring" process, copper salts (for greening peas and beans), formaldehyde, benzoic acid, and sodium benzoate. There was so much protest against his findings and so much criticism of his experimental methods that the Federal Government appointed a board of referees composed of five well-known physiological chemists, each of them at least equal in professional reputation to Dr. Wiley, to reinvestigate the matter. After a long series of careful experiments carried out individually by these men, some of Wiley's findings were reversed. They concluded that, in the small quantity in which some of these preservatives are apt to be used, no detectable harm to health need be feared. The use of formaldehyde and copper salts was forbidden, but the use of benzoic acid, sodium benzoate, sulfur dioxid, and sodium sulfite was allowed, provided the amount used be specified on the label. These conclusions were afterwards verified by a series of careful experiments made for the former Imperial German Government.

The significance to the consumer of this long drawn out and much talked of contest now lies only in the principle of the matter. The actual quantity of chemically preserved food which is apt to find its way to the family table is very small indeed, largely as the result of these investigations and of legislation. The chief food affected is commercial ketchup, a condiment only, and one which is more apt to serve as an ornament on the boarding house table than as a stable addition to a common sense diet.

The so-called natural preservatives, salt, sugar, wood-smoke, saltpetre, spices, and vinegar are not forbidden in any amount by the food laws. And yet there is grave doubt whether when used in immoderate amounts any or all these substances may not prove injurious.

The real objection to the use of preservatives lies in the fact that more or less decomposed foods, and unsanitary methods, may be made profitable to the manufacturer if he is able to avoid the consequent spoilage and unsalableness of his product by preserving to it at least the appearance and smell of freshness through the use of such substances as benzoates or sulfites. Honest ketchup for instance, unpreserved in this way, is on the market, and should be used to the exclusion of the questionable product which must declare sodium benzoate on its label.

The sulfuring of dried fruits. The sulfuring of dried fruits may be mentioned here as a deeply interesting question from California's point of view. The dryers insist that a marketable product of good keeping qualities cannot be made without the use of some sulfur dioxide. Some years ago the U. S. Department of Agriculture handed down a food inspection decision to the effect that not more than 350 mg. of sulfur dioxide per pound of dried fruit might be allowed. The agitation among growers and dryers was immediate and intense. They insisted that in the case of some fruits, such as apricots, peaches, pears, and apples, successful drying could not be accomplished with the addition of so little sulfur. The United States Government withheld its decision, then, till an investigation should show the merits of this claim. The results of that investigation have not yet been published, and meanwhile all the dried fruits are sulfured at the discretion of the producer. It is true, however, that a small amount of sulfuring provides protection against insect infestation, and that the law states that the producer may not use excessive sulfuring to conceal the inferiority of the product or to market an excess of water.

The blame for this condition of affairs should be placed squarely upon the consumer, who demands light-colored golden-yellow dried peaches, apricot-colored dried apricots, white dried apples and dried pears, light-brown figs, wistaria-colored raisins, and now bright light-green Thompson seedless raisins. None of these fruits can be supplied in these colors unless in addition to the natural drying process a strong sulfur bleaching be added.

As long as the market calls for these yellow sulfur and brimstone flavored dried fruits the market will be supplied with them by the producers. Sun-dried apricots, peaches, and other fruits are oxidized on the surface to a dark coloration by exactly the oxidative enzyme process which darkens freshly sliced apples, peaches, or potatoes. But such naturally darkened dried fruits cannot find a place in the present market. The California fig, white or black, dries naturally to a very dark color, the Thompson seedless raisin takes on a brown color, the malaga and other raisins become almost black. And all this without the admixture or aid of any "dirt" or dust. But the consumer will not have them when golden-yellow sulfured fruits are obtainable.

(*To be continued*)

A REVIVAL OF HOUSEHOLD SPINNING

MARGARET WILLIAMSON

Under ordinary circumstances, no one takes any notice of a dusty brown spinning wheel, tottering in its corner of the antique shop. One expects it to be there, just as one expects the rag rugs, the faded Paisley shawls of former splendor, the shimmer of Dutch silver, the deep blue of Steigel glass. But over the door of a New York shop there swings a sign that announces lessons in hand spinning, weaving, quilting, and tatting to be had within. In consequence, this time the spinning wheel takes on special significance, and explanations are required at once. These Mrs. Teller, who has charge of the shop, is happy to give, for she has flung her whole heart into her new project.

"The Society for the Revival of Household Industries and Domestic Arts was founded only about one year ago," she said, "but those of us who are deeply interested in it have great hopes of its future. You may smile, but I actually feel myself a missionary in this crusade to give back to the women of today the homely, creative tasks that their great-grandmothers knew. Scores of women who were engaged in war work for several years find that they wish to continue with something useful and remunerative. You would be astonished to know how eagerly many of them take up spinning, once the idea is presented to them, even if they are able to devote but a few hours to the work and produce only a small output. There is no reason why we cannot raise flax in this country, and spin and weave for ourselves in these days of the scarcity and costliness of linen. In my shop we have used only wool and linen, but of course one may work in silk. It has been estimated that an ordinary spinner, working eight hours a day for two weeks, should be able to spin and weave the material for her own suit. There's a goal worth effort."

According to the reports that Mrs. Teller is in a position to give, women of means and leisure are not the only ones to whom this work appeals. Not long ago she was visited by a representative from the North Bennett Street School, in Boston, where they are considering teaching the wives of the foreign unemployed to spin. A unit at the school has already been formed, and it is hoped to collect wheels enough to enable the women to work in their homes. Also, the work has been proved highly beneficial to children who are mentally deficient, for it requires just enough concentration on the slow-moving thread. In a

number of sanitariums interest in spinning is aroused; physicians are sending their representatives to investigate the matter. Several sanitariums have raised and spun their own flax. The work is not enervating, and it has great therapeutic value. To illustrate the simplicity of the task to an experienced spinner, it is only necessary to say that certain parts of it can be accomplished without even looking at it. In fact, the world's record was established by a blind girl in Ireland, who spun 250 miles of thread from one pound of flax.

Mrs. Teller believes that to weave machine-spun thread is practically time wasted. The result is much less pleasing, having none of the "floats," or little rough places, which occur in the hand-spun fabric. Material that has been hand-spun, she calls "fabric with a soul." As to the durability of these hand-spun and woven materials, most persons have witness in certain family heirlooms, exquisite linen sheets or towels, or quilts of soft colorings and quaint patterns, long beloved of the mountain peoples of the South.

Now, when conditions of labor make one weigh the advantages of being one's own producer and manufacturer, is surely the moment to interest women, particularly those in remote districts, in spinning their own flax and making their own household linens. The Society for the Revival of Household Industries and Domestic Arts hopes to interest women all over the country; it plans to send out teachers, to establish branches, to collect spinning wheels. And this last task is not so difficult as might appear. Wheels lurk in dark corners of many country attics. Often people will give them away. Sometimes, if they are prized, Mrs. Teller undertakes to return family relics, and she carefully marks each with the name and address of its owner. Not long ago a man sent into the city to her a truck load of spinning wheels, some broken of course, but all capable of repair.

"I could tell many curious stories of the happiness that has come into the lives of women through their having learned to spin," continued Mrs. Teller, "and of how this happiness has been passed along. For instance, a teacher in one of the Washington schools has recently become interested in spinning. During winter, she has but one day each week to give to it; but every summer she spends in the mountains of Pennsylvania and while there strives to gain the confidence of the country women, to persuade them to learn to spin. Gradually, after much perseverance, she is near to success. She is also considering inducing the Girl Scouts to take up spinning—a plan of infinite possibility."

Mrs. Teller also told of a young Southern girl, nervously exhausted from overwork during the war, who had been helped back to normal condition by spinning. She worked on wool found in the wellhouse at her old home until she had enough to knit herself a beautiful soft scarf.

A house in East Sixty-first Street built in 1799 by an aid-de-camp to General Washington has just been restored as new quarters for the Society. There spinning wheels already stand before the great fireplace in the kitchen, awaiting the women who have applied for instruction.

A SIMPLE HAND LOOM

A reader has sent us a cutting from the *Christian Herald* referring to the hand-loom weaving industry in India, wherein reference is made to a cheap and simple hand-loom designed by Adjutant F. C. Maxwell, who is in charge of the Salvation Army's industrial work in India, and who during his twelve years' connection with the hand-loom industry in that country has become acquainted with the various textures woven in different parts, from the coarse cloths of the Punjab to the fine silks of Assam. The hand-loom in question is stated to be suitable for either the coarsest cloth or the finest silk, and to be very easy to manipulate, and so simple in construction that the ordinary village carpenter can easily repair it.

These looms are supplied from the Salvation Army loom factory in Bombay. They have been adopted, it is stated, by several Indian Government Institutions, besides being of great service in the Salvation Army's industrial work in India.—*South African Journal of Industry.*

THE RESPONSIBILITIES OF THE HOMEMAKER

MILDRED WEIGLEY

Division of Home Economics, University of Minnesota

The following chart was made in order to show in graphic form a partial analysis of the vocation of homemaking. The chart aims to indicate those responsibilities which are frequently carried either in part or in whole by the homemaker.

- Responsibilities of the homemaker
  - Skill in occupations
    - Preparation and serving of food
      - Food standards
      - Planning of meals
      - Dietary studies
      - Care of food
      - Scheduling and dispatching
      - Time studies
    - Construction and repair of clothing and furnishings
      - Repair of linen, curtains, etc.
      - Repair of clothing
      - Children's clothing
    - Care and rearing of children
      - Physical development of child
    - Care of house
      - Cleaning operations
      - Use of labor-saving devices
      - Care of equipment
      - Arrangement of equipment
      - Care of storage space
    - Laundering
  - Joint management of home
    - Purchasing agent and business manager
      - Accounts
        - Analysis of expenditures
        - Budgeting
        - Balancing and settlement of accounts
      - Savings and investments
      - Marketing
      - Cost of food
      - Meal planning
      - Selection of shelter
      - Selection and replacement of equipment (including labor-saving devices)
      - Selection of clothing
    - Educational manager
      - Food requirements
      - Child training (reading, play, discipline, formation of habits)
    - Establishing character of enterprise
      - Standards for food and service
      - Standards for individual cleanliness
      - Standards for order
      - Standards for beauty
      - Cleanliness of home
      - Standards for clothing
      - Standards of business management
    - Social manager
      - Atmosphere of hospitality
      - Recreation—personal, community
      - Group relations within family and community
    - Superintendent of plant
      - Scheduling of work
      - Efficient oversight of workers and equipment

EDITORIAL

A Call to Service. The great hour of opportunity for the American Home Economics Association is at hand, an hour made possible by the contributions of the home economics worker to the world during the war. The call for even greater service is now being made to every home economics worker in America.

The world is focusing on the health of the human race from childhood to old age. Every association dedicated to bettering human life is calling for more information regarding human nutrition, maintenance of efficiency, and the direct teaching of those basic principles which enter into everyday living. In all these, home economics workers are the leaders who must point the way. The need was never more compelling, the call was never more imperative; they must either forge ahead and assume leadership or surrender it to others.

The International Congress of Home Economics Instruction to be held in Paris in July, 1922, is asking the American Home Economics Association for assistance. It is our opportunity to help direct the trend of home economics education and practice over all the world. Australia is asking home economics educators to come to her and advise regarding the systematic introduction of home economics into her universities and secondary schools. Our own Mrs. Norton is organizing the work for the American College for Girls at Constantinople.

The hour for leadership, for service, for constructive development, was never so full of promise for the Association.

The Atlantic City meeting proved beyond question the intense interest of school authorities and the public in home economics and its constructive program. In developing the policies and the program of work for next year, the Association needs every one of the ten thousand home economics trained women in the United States. Will any one of you fail to answer this challenge to service, to contribute your part to the annual meeting at Swampscott, Massachusetts, June 27 to 30? The Association needs your experience, your help, your point of view. The whole world needs all that America can give along home economics lines. This is a call to service, to leadership for every woman in the United

States who has dedicated her life to bettering humanity through direct scientific, systematic training in home economics.

MARY E. SWEENY.

The New Editor of the Journal. Mrs. Mary De Garmo Bryan, President of the American Dietetic Association, has consented to be editor of the JOURNAL during Mrs. Norton's absence in Constantinople. Mrs. Bryan begins her work with the June issue. For the intervening period since Mrs. Norton sailed in January, Ruth Van Deman, of the Office of Home Economics, United States Department of Agriculture, has been acting for her.

The International Congress of Home Economics Instruction Postponed. Word has just been received from M. Leon Genoud, director of the International Federation of Home Economics Instruction, that the Congress which was to have been held in Strasbourg, on July 28 to 31, 1921, has been postponed for one year and the place of meeting changed to Paris. The committee arranging for this Congress could not complete the preparatory work by the date originally set. With another year in which to think about and plan for this Congress, it is hoped that the American Home Economics Association will have an even fuller representation than would have been possible this year.

A Gram of Radium for Madame Curie. Madame Curie, the greatest living woman in the scientific world, will visit this country about the middle of May, on invitation from the women of America. With her will come her two daughters, the elder also a scientist.

Madame Curie, who is fifty-six years old, is the most gifted of three unusual daughters of a Polish educator. One of her sisters is principal of an important young women's school in Warsaw, and the other is director of a famous sanitarium in the Galician mountains. Madame Curie went from Warsaw to the Sorbonne when a young woman and in Paris married Professor Curie, who met a tragic death by accident in 1906.

Madame Curie has received the Nobel Prize for her discoveries in radium and has also received other important awards and distinctions from several countries. She has put all of the money received from the Nobel Prize and other awards into the founding of the Curie Radium Institute in Paris, where she now works unceasingly. The Institute

was completed in 1913 and was closed during the war because Madame Curie volunteered for work in the army hospitals.

Madame Curie will be able to remain in the United States for but two or three weeks and can visit only a few cities. In these cities groups of the most noted physicians and men of science are coöperating with the women to give this great woman of science a fitting welcome.

The women of America have conceived the beautiful idea of offering to Madame Curie on the occasion of her visit to this country a gram of radium to use solely for her experimental work. She has never possessed such an amount of radium for her independent use. As this gram will cost approximately one hundred thousand dollars, an appeal will be made to the women of the country to contribute the money necessary for the purchase. Home economics workers in all parts of the country will of course want to have a share in this gift, and contributions may be sent to the Journal Office. Checks should be made payable to Mme. Curie Radium Fund.

Calcium in the American Diet. Dr. H. C. Sherman[1] again emphasizes the importance of more attention to the calcium in the diet of American people. He has collected and published comprehensive data on the calcium metabolism of adult man, representing the work of several different investigators and covering ninety-seven experimental days on many subjects. The average calcium metabolism is given as 0.45 gram for the adult man of 70 kilos whose protein requirement is known to be 44 grams. This bare minimum of both protein and calcium should, of course, be increased somewhat in practical dietary planning to allow for a margin of safety. For every 100 grams of protein in the diet there should be at least 1 gram of calcium or 1.4 grams of calcium oxide.

Studies of 224 typical American diets, part of them made by the U. S. Department of Agriculture sometime ago and part more recently by the Association for Improving the Condition of the Poor,[2] show the average to contain 106 grams protein per adult man, which is 140 per cent above the actual requirement of 44 grams. The amount of calcium in the same diets was 0.74 gram, or only 64 per cent above the

[1] Sherman, H. C.: Calcium requirement of maintenance in man, *Jour. Biol., Chem.*, 44, 21. (Oct. 1920.)

[2] Sherman, H. C., and Gillett, L. H.: The adequacy and economy of some city dietaries, N. Y. Association for Improving the Condition of the Poor, Publication No. 121 (1917).

requirement. Only one of these 224 families fell below the protein standard while 1 in 6 fell below in the amount of calcium. If the calories in all cases had been increased to 3000 per adult man, none would have been low in protein, while 7 per cent would still have been low in calcium. The explanation obviously lies in the fact that the American diet furnishes too much meat for the amount of milk.

Although, as Sherman suggests, it might be possible to sprinkle calcium onto our food from a salt cellar, it would probably be less difficult to teach the public to use more of the calcium rich foods, such as milk and green vegetables, and such an addition would at the same time furnish the vitamines more abundantly.

Nuts for our Proteins. Nuts deserve, at least in part, the consideration by "nutarians" which has made them an important source of protein in the diet of these food faddists. Nuts were found long ago by Jaffa to be thoroughly digested and quite easily so if taken as a part of the meal. Their high coefficient of digestibility has been demonstrated also in later experimental work by other investigators. As a sole source of protein in rat-feeding experiments conducted by Cajori[1] they have proved themselves according to the criterion of Osborne and Mendel: "If an animal is able to attain adult size upon a diet furnishing protein from a single source the nutritive value of this protein is clearly established."

Cajori in his report states that satisfactory growth and milk production were observed in young rats on diets in which the almond, English walnut, filbert, and pine nut acted as the essential protein. Daniels and Loughlin[2] two years ago found peanuts and peanut meal capable of furnishing all the necessary amino acids for the growth of rats when the protein from the peanuts constituted 15 to 18 per cent of the total food. Likewise Hoobler[3] found that wet nurses could use nut proteins in the form of almonds, English walnuts, pecans, and peanut butter just as efficiently in the production of milk as they could use the animal proteins. With the exception of the nut proteins, the animal proteins were better than the vegetable ones for the elaboration of milk.

[1] Cajori, F. A.: Some nutritive properties of nuts: their proteins and content of water soluble vitamine, *Jour. Biol. Chem.*, 43, 583 (Sept. 1920).

[2] Daniels, A. L., and Loughlin, R.: Feeding experiments with peanuts, *Jour. Biol. Chem.*, 33, 295 (1918).

[3] Hoobler, B. R.: The effect on human milk production of diets containing various forms and quantities of proteins, *Amer. Jour. Dis. Children*, 14, 105 (1917).

The water-soluble B vitamine is present in these nuts in sufficient quantities for growth, as both Cajori and Daniels and Loughlin agree. That the fat soluble vitamine is lacking, however, is reported by both the above as well as by Coward and Drummond[4] in a recent English publication. The inorganic constituents require supplementing also. It would appear that the much used term "meat substitute" as applied to nuts is an accurate one.

THE QUESTION BOX

Question: Is frozen ice cream which has been allowed to stand in the cans frozen or partially frozen injurious? Would such an ice cream be more likely to contain organisms causing ptomain poisoning than homemade ice cream similarly treated or milk which has been kept in cans for 24 hours? Does it matter how many times ice cream may be frozen, melted, and re-frozen, provided it is not kept for a longer time than the milk and cream from which it is made would have kept sweet?

Answer: In normal cream held for some time the lactic bacteria should exist in considerable numbers. But when cream is held at low temperatures these organisms do not develop rapidly, whereas certain types of putrefactive organisms may develop even at refrigeration temperatures. These, however, would not be present in ice cream produced under sanitary conditions. (Marshall, C. E. "Microbiology," 2nd ed., p. 448.) Refreezing ice cream, therefore, would produce no untoward results provided there were no putrifying organisms present in the ingredients from which the cream was prepared. Such ice cream could be kept considerably longer than the milk and cream from which it was made, provided these were kept at the usual ice-box temperature.

Question: Is there any evidence that the constituents of milk, particularly the vitamines, ash, and protein, are not deleteriously affected and rendered less available for use by the human body by the process of boiling?

Answer: The results of recent investigations indicate that the antiscorbutic vitamine in milk is not thermostable, considerable destruction taking place even at the pasteurization temperatures. The other two known vitamines, fat-soluble A and water-soluble B, appear not

[4] Coward, K. H., and Drummond, J. C.: Nuts as a source of vitamine A, *Biochem. Jour.*, 14, 665 (Oct. 1920).

to be materially, if at all affected, by boiling. In fact, milk may be heated considerably above boiling without appreciably diminishing the potency of these two vitamines. The protein also seems to be unaffected by the usual methods employed in heating milk. The most significant changes that take place in milk during the process of heating are in the mineral constituent, especially the mono- and di- calcium and magnesium phosphates. Some of these are rendered insoluble and in this form appear to be less available. These changes in the mineral constituents, however, are not dependent upon the boiling temperature but may take place at pasteurization temperatures. In fact, milk boiled quickly for short periods is less affected than milk pasteurized by the "hold" system. The literature is reviewed in "A Deficiency in Heat Treated Milk" by A. Daniels and R. Loughlin, in the Journal of Biological Chemistry, Vol. XLIV (1920), p. 381.

BOOKS AND LITERATURE

The Nation's Food. By RAYMOND PEARL. Philadelphia and London: W. B. Saunders Company, 1920, pp. 274. $3.50.

In this book we have for the first time data which will enable us to answer the questions how much and what kind of food does the American people as a whole eat. It is a statistical study based on material gathered for the Food Administration. The author has kept in mind the purpose of providing raw statistical material for the student of social and economic problems. He has refrained from any interpretation of the facts presented or from any criticism of the conclusions which might be drawn from these facts.

This study marks a step in the socialization of our economics. The author deals with the food supply, not in terms of dollars worth of production, of exports and imports, but in terms of content of nutrient material. In admirable tables there are presented data showing how much protein, fat, and carbohydrates, and calories are annually produced in forms usable for human food; how much, in terms of these values, is imported and exported; how much is available for home consumption; and how, in each case, the distribution is made among the several classes of food commodities.

The period studied covers the fiscal years 1911–12 to 1917–18. The tables are exceptionally clear and well set up, and a good index makes it possible to use them readily for reference. The procedure by which the figures have been arrived at is carefully given and any limitation to the accuracy of the figures pointed out.

Several important points in the food habits of our people, of which the student in many fields will be glad to have proof, are interestingly brought out. In fact this book should be of use to a wide range of students, to the student of agricultural economics, of nutritional physiology, or sociology, to the practical social worker, and to the maker of tariffs. All of these persons will find in it definite material for answering many troublesome questions in regard to the size and use of our food supply and for supplying a basis upon which to make suggestions for improvement in the well-being of our people.

CHASE GOING WOODHOUSE,
Smith College.

Elementary Home Economics. By MARY LOCKWOOD MATTHEWS. Boston: Little, Brown and Company, 1921, pp. 343. $1.50.

This book contains first lessons in Sewing and Textiles, Foods and Cookery, and the Care of the House. The sewing and cooking lessons follow the better type of conventional lessons planned to meet the needs of the girls' wardrobe and the three daily meals of the family. The pages devoted to the care of the house are all too few in number and do not sufficiently emphasize the importance of this portion of the housewife's task, though provision is made for adequate study of kitchen furnishings in connection with the cooking lessons. The book is printed in good type and binding, affording a pleasing appearance, and the contents will undoubtedly prove of value to the young teacher who is teaching sewing and cooking in the grades and who feels the need of help from the experience of others.

CARRIE ALBERTA LYFORD.

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The Child and the Kindergarten. Kindergarten Circular No. 6, February, 1920.
Civic Training Through Service. Arthur William Dunn. Teacher's Leaflet No. 8.
Constitution of a Community Association. Community Center Circular No. 1.
Recreation and Rural Health. Teacher's Leaflet No. 7.

Issued by the U. S. Department of Labor:
Children's Year. Children's Year Follow-up Series No. 4, Children's Bureau.
The Child-Welfare Special. Children's Year Follow-up Series No. 5, Children's Bureau.
Minimum Quantity Budget. Reprint from the Mo. Labor Review, Bureau of Labor Statistics.

Issued by the U. S. Public Health Service:
Malnutrition. Keep Well Series No. 11.
Hygienic Laboratory Bulletin No. 116. (Contains articles on vitamines and pellagra.)

Issued by the Bureau of Applied Economics, Washington, D. C.:
Changes in Cost of Living and Prices 1914 to 1920. Bulletin No. 6.
Standards of Living. Bulletin No. 7, 1920.
Wages in Various Industries and Occupations. Bulletin No. 8, 1920.

Issued by the New York State College of Agriculture at Cornell University:
The Cornell Reading Course for the Home: Thrift Series—Lesson 132, Economics of Good Furnishing, Annette J. Warner; Lesson 131, Economics of a Sound House, Helen Binkerd Young.

Issued by the College of Industrial Arts, Denton, Texas:
Feeding the Child. Juanita E. Darrah. Number 77.
How to Buy, Care For, and Use the Family Wardrobe. Margaret Gleason. Number 79.

Issued by the Armstrong Cork Co., Lancaster, Pa.:
The Art of Home Furnishing and Decoration. Frank Alvah Parsons.
Detailed Directions for Laying and Caring for Linoleum.
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Legal Recognition of Industrial Women. Eleanor L. Lattimore and Ray S. Trent. Industrial Committee, War Work Council of the National Board Y. W. C. A., N. Y. City.
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Putting the Home on a Business Basis. Edythe P. Hershey. Bulletin, No. 2003, University of Texas, Austin, Texas.

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NEWS FROM THE FIELD

The Trustees of Pratt Institute take pleasure in announcing the appointment of Frederick W. Howe as Director of the School of Household Science and Arts, succeeding Isabel Ely Lord, who resigned from the directorship in July, 1920. Mr. Howe comes to Pratt Institute from the State Normal School at Framingham, Massachusetts, where for twenty-two years he has been Director of the Department of Chemistry, Foods, and Sanitation in the Household Arts Department. He is also Scientific Director of the Walker Gordon Laboratory Company, Director of the Food Laboratory of the Boston Floating Hospital, Director of the Garland School of Homemaking, and Director of the Food Laboratory of the Infants' Hospital, all in Boston. His wide and varied experience includes also several years' association with the Massachusetts Institute of Technology as instructor in chemistry.

The Institute is to be congratulated upon having secured the services of a man of Mr. Howe's high professional attainments and fine personal qualities. His ideals for the work and his breadth of human sympathy assure the carrying on of the best traditions of the school and of the Institute. Mr. Howe enters upon his official duties July first. Until this date the administrative work of the school will continue to be carried on by Helen Hollister, Acting Director.

The Institute has announced the discontinuance of the course in teacher training in the School of Household Science and Arts, in order to more fully develop the courses in training for homemaking and in training for trade and professional work.

The University of Kentucky. Through the coöperation of the Home Economics Department of the University of Kentucky the monthly food cost at the House of Reform at Greendale has been reduced from $8,850 to $4,810, and better meals have been provided for the inmates.

The work of planning the menus and the budget was done by Anne McAdams, a senior in the Home Economics Department, who graduated in February. Upon her graduation, Miss McAdams was appointed state dietitian under the direction of the State Board of Charities and Corrections.

The University of Florida. The new General Extension Division, which represents all state institutions of higher learning, has made an unprecedented record by enrolling 5804 students during the first twelve months of its existence.

Oregon Agricultural College. Because homemaking is the occupation of the majority of women, and because the School of Home Economics realizes the importance of training for that work just as for any other profession, a one-year Homemakers' Curriculum has been established. This curriculum provides especially for those women whose school does not qualify them to enter the regular courses, or whose duties demand that they content themselves with a short period of training for their life w rk, or whose aim in seeking training at the College is exclusively practical

The second annex to the Home Economics Building was opened on March 12, 1921.

The University of Virginia is planning a special three months course for prospective nurses, to be given during the summer quarter. This will include anatomy, physiology, sanitation, dietetics, bacteriology, pathology, and the history and ethics of nursing.

The purpose of the course is to give the theoretical work before nurses enter upon their practical training, and to shorten the term of training now required.

Russell Sage College, Troy, N. Y. A conference on household economics was held February 11 and 12 for the faculty and students of the college and for those in the community who were interested.

The topics considered were grouped under the three headings: Problems in Nutrition, Household and Institutional Administration, Training Teachers of Home Economics. Among the speakers from other institutions were Anna Cooley and Emma Gunther, Teachers College; Cora Binzel, Cornell University; Myrtle Caudell, State Normal School, Buffalo; Mrs. Mary De Garmo Bryan, President, American Dietetic Association.

Special Instruction in Homemaking. A special type of instruction in vocational homemaking has been organized in Bakersfield, Cal., for Mexican girls who were not making satisfactory progress in school because they could not read and speak the English language.

These girls prepare and serve lunch for 14 teachers, and also a free lunch for 30 undernourished children from the school near by. They are given the full responsibility for the preparation of the food each day. They are taught general housekeeping processes, house furnishing, and the care of children. Last year they made a complete layette and took entire charge of a three-year-old boy while his sister attended school for three months. They make their own clothes and often wash and iron them at school.

The informal organization of the work affords opportunity for free discussion of good standards for home and community life, and improvement in the English language.

An Institute for the Training of Nutrition Workers will be conducted under the auspices of the Elizabeth McCormick Memorial Fund in Chicago, Illinois, June 13 to 28 inclusive. Dr. William R. P. Emerson, of Boston, will give the lectures and class demonstrations, assisted by members of the staff of the Elizabeth McCormick Memorial Fund. For information write to the Elizabeth McCormick Memorial Fund, 6 North Michigan Ave., Chicago, Ill.

NOTES

Mrs. Ann Gilchrist Strong, formerly of Beroda College, India, is now professor of household arts in the University of Otago, Dunedin, New Zealand.

Among the contributors to a recent volume, *America and the New Era*, is Dr. Sophonisba P. Breckinridge, Assistant Professor of Social Economy in the University of Chicago. This book is concerned chiefly with social reconstruction, and has an introduction by Herbert Hoover. Other contributors are Richard T. Ely, Francis G. Peabody, and Frederic C. Howe.

Dr. John M. Thomas of Middlebury, Vermont, has accepted the presidency of State College, Pennsylvania. This is an appointment of special interest to home economics workers because Doctor Thomas is deeply interested in rural community problems and rural life in general, and has written and spoken a great deal about service in rural districts.

The Fourteenth Annual Meeting of the American Home Economics Association will be held at the New Ocean House, Swampscott, Mass., June 27 to 30. Further announcement will appear in the June Journal.